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10/789,474	02/27/2004	Kenneth Avicola		8555

7590 07/27/2005  
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EXAMINER

MALLARI, PATRICIA C

ART UNIT PAPER NUMBER

3736

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/789,474

Applicant(s)

AVICOLA ET AL.

Examiner

Patricia C. Mallari

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the jewelry as a finger ring, attach to the skin of the wearer by a patch, and as a patch in the shape of a heart must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

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Claims 1, 9, and 12-14 are objected to because of the following informalities:

On line 2 of element D of claim 1, "wearers heart" should be replaced with "wearer's heart";

On lines 1-2 of claim 9, "red green and blue emitters" should be replaced with "red, green, and blue emitters";

On line 1 of claim 12, "and ASIC" should be replaced with "an ASIC";

On line 1 of claim 13, "comprises surface" should be replaced with "comprises a surface" ;

On line 2 of claim 14, "said thresholds" should be replaced with "said predetermined rates"; Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6 and 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The skin, the earlobe, or any body portion, is non-statutory subject matter and cannot positively be claimed. To overcome these rejections, the following changes should be made:

On line 1 of claim 6, replace "is attached to skin" with "is adapted to be attached to skin";

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On lines 1-2 of claim 16, replace "positioned on the inside of an earlobe and connected through an earlobe" with "adapted to be positioned on the inside of an earlobe and adapted to be connected through an earlobe".

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 3,978,849 to Geneen in view of US Patent No. 4,867,442 to Matthews. Geneen teaches flashing jewelry comprising a pulse sensor circuit which detects each beat of a wearer's heart/pulse by analyzing electrical signals from a pulse detector 7 (col. 4, lines 19-28; col. 6, lines 40-58 of Geneen). The jewelry includes at least two visible light emitters (fig. 6; table 2; col. 4, lines 29-34 of Geneen). A first trigger circuit initiates electrical pulses to cause one of the visible light emitters to flash once per heart/pulse beat (col. 5, lines 34-41; col. 7, lines 10-17 of Geneen). A pulse rate calculation means calculates the wearer's pulse rate (col. 6, line 59-col. 7, line 10 of Geneen), and a second trigger circuit initiates pulses to cause a second visible light emitter to flash once per heart/pulse beat when the pulse rate exceeds a first predetermined rate (col. 5, lines 51-55; col. 7, lines 10-11 and lines 33-38 of

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Geneen). Geneen teaches a piezoelectric transducer as the pulse sensor, rather than an infrared emitter and detector.

However, Matthews teaches a pulse sensor 48 comprising an infrared light emitter positioned to emit infrared light into tissue of a wearer, an infrared detector positioned to detect infrared light emanating from the tissue, and a power source 56 for the emitter and detector (col. 4, lines 34-47; col. 5, lines 9-21 of Matthews). Matthews further states that a piezoelectric transducer may be used in place of the infrared light emitter and detector to detect the pulse of the user (col. 5, lines 21-26 of Matthews). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the infrared light emitter and detector and power source, as described by Matthews, in place of the piezoelectric transducer of the Geneen since Matthews teaches the infrared light emitter and detector and the piezoelectric transducer to be functionally equivalent.

Regarding claim 2, a third trigger circuit initiates pulses to cause a third light emitter to flash once for each heart beat when the heart rate exceeds a first predetermined rate (table 2; col. 5, lines 32-55 of Geneen).

Regarding claim 6, the jewelry is attached to the skin of the wearer by a patch 2 (figs. 5 & 8 of Geneen), wherein a patch is a small piece, part, or section, especially one that contrasts with the whole, and the wristband 2 may be considered such a patch or small piece.

Regarding claim 8, the jewelry includes at least three visible light emitters (fig. 6 of Geneen).

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Claims 3, 9-11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geneen and Matthews as applied to claims 1, 2, 6, and 8 above. Geneen, as modified by Matthews, teaches the visible light emitters as emitting red, amber, and green light rather than red, blue, and green light. However, the applicant has not disclosed that the particular light color blue is used for any particular purpose. Moreover, it appears that the flashing jewelry would perform equally well with any three different colored light emitters. Accordingly, the use of a blue light emitter is deemed to be a design consideration that fails to patentably distinguish over the prior art of Geneen in view of Matthews.

With further regard to claims 10 and 11, the choice of color signifying a particular pulse rate condition has similarly not been disclosed as solving a particular problem or used for a particular purpose and is similarly deemed a design consideration that patentably fails to distinguish over the prior art of Geneen in view of Matthews. One emitter is programmed to flash with each heart beat, a second flashes with each heart beat when the rate exceeds a first threshold, and a third flashes with each heart beat when the rate exceeds a second threshold (col. 5, lines 32-55 of Geneen). With further regard to claim 11, the first threshold is at least 115 % of the wearer's resting heart rate and the second threshold is at least 130% of the resting heart rate (table 2 of Geneen).

Regarding claim 14, a transmitter transmits a signal to an audio device to initiate a sound when one of the thresholds is exceeded (col. 5, lines 43-55 of Geneen).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geneen in view Matthews as applied to claims 1, 2, 6, and 8 above, and further in view of US Patent No. 4,647,217 to Havel. Geneen, as modified, teaches the jewelry as being a watch. However, Havel teaches a piece of jewelry used for indicating the pulse rate to a user, wherein the jewelry may be one of any type of jewelry including a watch, a ring, or an earring (col. 23, lines 4-14 of Havel). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to fashion the jewelry of Geneen, as modified by Havel, as a ring or earring instead of a watch, since Havel teaches the three types of jewelry are functionally equivalent pieces of jewelry for indicating pulse rate to a user.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geneen in view of Matthews, as applied to claims 1, 2, 6, and 8 above, and further in view of US Patent No. 6,572,636 to Hagen et al. Geneen, as modified, fails to teach the jewelry as a patch in the shape of a heart. However, Hagen discloses a pulse sensor and indicator that may be provided in the form of a patch or in the form of jewelry (col. 1, lines 48-51 of Hagen). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the jewelry of Geneen, as modified by Matthews in the form of a patch. Geneen, as modified by Matthews and Hagen fail to teach the patch being in the shape of a heart. However, the applicant has not disclosed that the particular shape of the patch is used for any particular purpose. Moreover, it appears that the flashing jewelry in the form of a patch would



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perform equally well with any shape patch. Accordingly, the patch being in the shape of a heart is deemed to be a design consideration that fails to patentably distinguish over the prior art of Geneen in view of Matthews and Hagen.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geneen in view of Matthews as applied to claims 1, 2, 6, and 8 above, and further in view of US Patent No. 6,277,079 to Avicola. Geneen, as modified, is silent as to the type of electric circuit employed. However, Avicola teaches flashing jewelry for displaying a user's pulse rate employing an ASIC circuit (col. 3, lines 55-61 of Avicola). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the circuit of Avicola in the flashing jewelry of Geneen, as modified by Matthews, since Geneen, as modified, teaches jewelry using an electric circuit, and Avicola describes such an appropriate type of electric circuit.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geneen in view Matthews as applied to claims 1, 2, 6, and 8 above, and further in view of US Patent No. 5,490,523 to Isaacson et al. Geneen, as modified, teaches an electric circuit for sensing the pulse rate and driving LEDs (col. 6, line 41-col. 7, line 40; fig. 4 of Geneen), but is silent as to the type of circuit. However, Isaacson describes a device for determining pulse rate wherein a surface mounted circuit is used to determine the pulse and to drive the LEDs (col. 3, line 60-col. 4, line 3 of Isaacson et al.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the type of circuit of Isaacson as the circuit of Geneen, as modified by Matthews, since

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Geneen, as modified, teaches an electric circuit, and Isaacson discloses an appropriate type of circuit.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geneen in view of Matthews as applied to claims 3, 9-11, and 14 above. Geneen, as modified by Matthews, teaches the sound as being a beep rather than the sound of church bells. However, the applicant has not disclosed that the particular type of sound is used for any particular purpose. Moreover, it appears that the flashing jewelry would perform equally well with any type of sound emitted. Accordingly, the use of church bells as the type of sound emitted is deemed to be a design consideration that fails to patentably distinguish over the prior art of Geneen in view of Matthews.

#### ***Allowable Subject Matter***

Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 16, the prior art of record fails to teach or fairly suggest a battery unit adapted to be positioned on the inside of an earlobe and adapted to be connected through the earlobe to a circuit board comprising the infrared emitter, detector, and the at least two visible light sources.

#### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571) 272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patricia Mallari  
Patent Examiner  
Art Unit 3736

  
**CHARLES MARMOR**  
**PRIMARY EXAMINER**